CLAIMS

Now, therefore, the following is claimed:

1. A communication system, comprising:

a first transceiver configured to communicate via a first subscriber line with a transceiver located at a remote premises;

a second transceiver configured to communicate via a second subscriber line with a transceiver located at the remote premises;

a third transceiver configured to communicate via a third subscriber line with a transceiver located at the remote premises; and

logic configured to switch communication from the first transceiver to the third transceiver in response to a detection of a communication problem associated with the first subscriber line, the logic further configured to switch communication from the second transceiver to the third transceiver in response to a detection of a communication problem associated with the second subscriber line.

2. The system of claim 1, wherein the first, second, and third transceivers are located at a central office of a telecommunication network.

3. The system of claim 1, wherein the first, second, and third transceivers are located at a customer premises.

4. The system of claim 1, further comprising:

a transformer coupled to the third transceiver, the transformer having a pair of taps coupled to the third subscriber line; and

a direct current (DC) power interface configured to apply a DC voltage difference across the taps.

5. The system of claim 1, further comprising:

a direct current (DC) power source; and

a control element configured to electrically isolate the first subscriber line from the DC power source when the third transceiver is being used to backup the first transceiver, the control element further configured to electrically couple the first subscriber line to the DC power source when the first transceiver is communicating on the first subscriber line.

6. The system of claim 1, further comprising a control element configured to sum power from at least two of the subscriber lines.

7. A communication system, comprising:

a first transceiver configured to communicate via a first subscriber line with a transceiver located at a remote premises;

a second transceiver configured to communicate via a second subscriber line with a transceiver located at the remote premises;

a third transceiver configured to communicate via a third subscriber line with a transceiver located at the remote premises; and

logic configured to enable the third transceiver to selectively backup both of the first and second transceivers.

8. The system of claim 7, wherein the logic is configured to switch communication from the first transceiver to the third transceiver in response to a detection of a communication problem associated with the first subscriber line, and wherein the logic is further configured to switch communication from the second transceiver to the third transceiver in response to a detection of a communication problem associated with the second subscriber line.

9. The system of claim 7, further comprising:

a transformer coupled to the third transceiver, said transformer having a pair of taps coupled to the third subscriber line; and

a direct current (DC) power interface configured to apply a DC voltage difference across the taps.

10. The system of claim 7, further comprising a control element configured to sum power from at least two of the subscriber lines.

11. The system of claim 7, wherein the logic is configured to split an input data stream into at least a first output data stream and a second output data stream, the logic configured to interface the first and second output data streams with the first and second transceivers such that the first and second transceivers respectively transmit the first and second output data streams on the first and second subscriber lines, the logic configured to interface one of the output data streams with the third transceiver in response to a communication problem associated with one of the first and second subscriber lines, the logic further configured to dynamically select the one output data stream for interfacing with the third transceiver based on which of the first and second subscriber lines is associated with the communication problem.

12. The system of claim 7, further comprising:

a direct current (DC) power source; and

a control element configured to electrically isolate the first subscriber line from the DC power source when the third transceiver is being used to backup the first transceiver, the control element further configured to electrically couple the first subscriber line to the DC power source when the first transceiver is communicating on the first subscriber line.

13. A communication system, comprising:

a first transceiver configured to communicate via a first subscriber line with a transceiver located at a remote premises;

a second transceiver configured to communicate via a second subscriber line with a transceiver located at the remote premises;

a third transceiver configured to communicate via a third subscriber line with a transceiver located at the remote premises; and

logic configured to split an input data stream into at least a first output data stream and a second output data stream, the logic configured to interface the first and second output data streams with the first and second transceivers such that the first and second transceivers respectively transmit the first and second output data streams on the first and second subscriber lines, the logic further configured to interface one of the output data streams with the third transceiver in response to a communication problem associated with one of the first and second subscriber lines, the logic further configured to dynamically select the one output data stream for interfacing with the third transceiver based on which of the first and second subscriber lines is associated with the communication problem.

14. The system of claim 13, further comprising:

a transformer coupled to the third transceiver, the transformer having a pair of taps coupled to the third subscriber line; and

a direct current (DC) power interface configured to apply a DC voltage difference across the taps.

15. The system of claim 13, further comprising:

a direct current (DC) power source; and

a control element configured to electrically isolate the first subscriber line from the DC power source when the third transceiver is being used to backup the first transceiver, the control element further configured to electrically couple the first subscriber line to the DC power source when the first transceiver is communicating on the first subscriber line.

16. The system of claim 13, further comprising a control element configured to sum power from at least two of the subscriber lines.

17. A communication method, comprising the steps of:

communicating between a first pair of transceivers on a first subscriber line;

communicating between a second pair of transceivers on a second subscriber line; and

enabling a third pair of transceivers coupled to a third subscriber line to selectively backup both of the communicating steps.

18. The method of claim 17, further comprising the steps of:

switching communication from the first pair of transceivers to the third pair of transceivers in response to a detection of a communication problem associated with the communicating between a first pair of transceivers step; and

switching communication from the second pair of transceivers to the third pair of transceivers in response to a detection of a communication problem associated with the communicating between a second pair of transceivers step.

19. The method of claim 17, further comprising the step of applying a direct current (DC) voltage difference to a pair of transformer taps coupled to the third subscriber line.

20. The method of claim 17, further comprising the step of summing power from at least two of the subscriber lines.

21. A communication method, comprising the steps of:

splitting a data stream into a first data stream and a second data stream;

interfacing the first data stream with a first transceiver such that the first data stream is communicated by the first transceiver on a first subscriber line to a transceiver located at a remote premises;

interfacing the second data stream with a second transceiver such that the second data stream is communicated by the second transceiver on a second subscriber line to a transceiver located at the remote premises;

detecting a communication problem associated with one of the first and second subscriber lines;

interfacing, in response to the detecting step, one of the first and second data streams with a third transceiver such that the one data stream is communicated by the third transceiver on a third subscriber line to a transceiver located at the remote premises; and

dynamically selecting the one data stream to be interfaced with the third transceiver in response to the detecting step based on which of the first and second subscriber lines is associated with the communication problem.

22. The method of claim 21, further comprising the step of applying a direct current (DC) voltage difference to a pair of transformer taps coupled to the third subscriber line.

23. The method of claim 21, further comprising the step of summing power from at least two of the subscriber lines.